JP 6823620 B2 2021.2.3

FIG.1

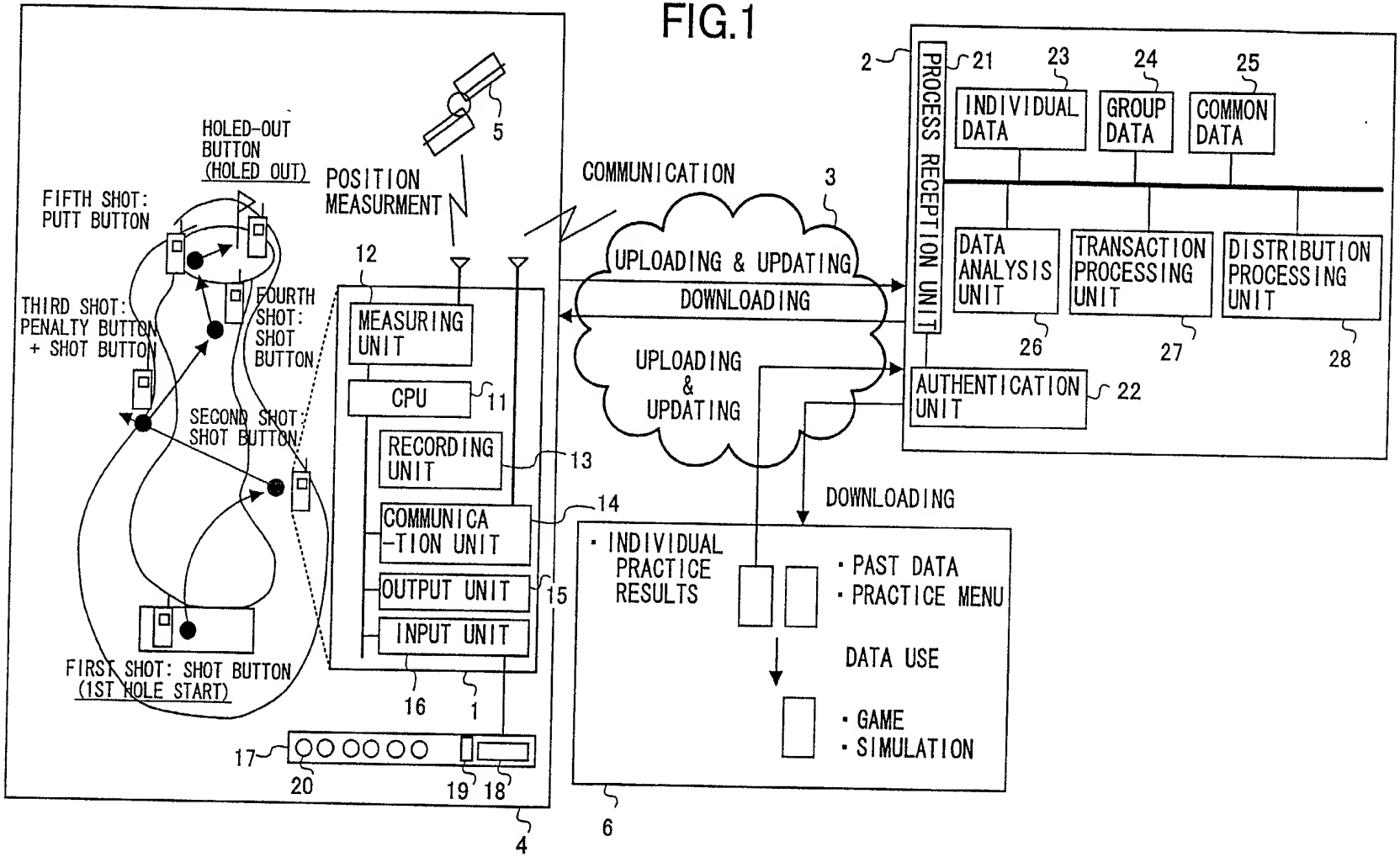


FIG.2

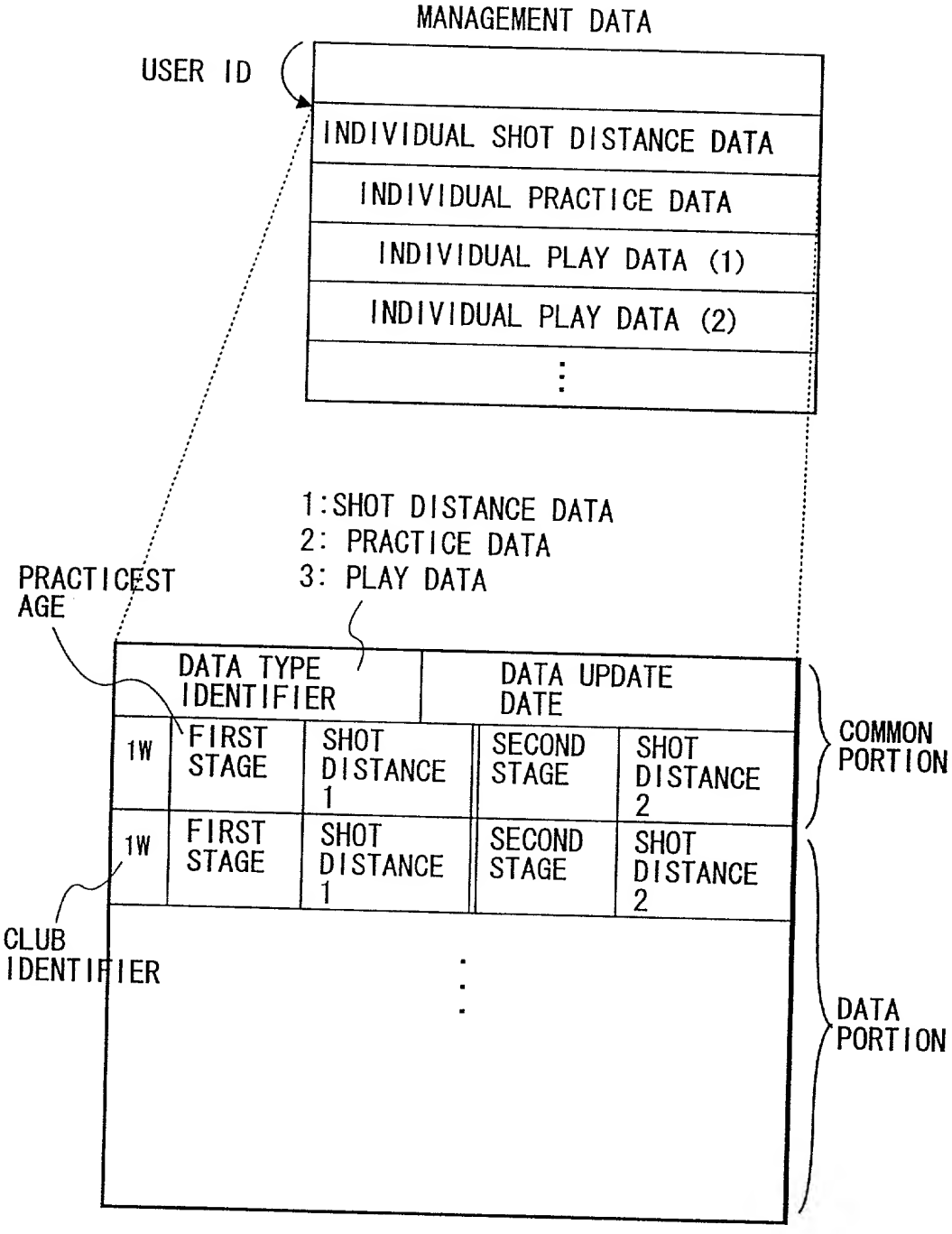

MANAGEMENT DATA
USER ID
INDIVIDUAL SHOT DISTANCE DATA
INDIVIDUAL PRACTICE DATA
INDIVIDUAL PLAY DATA (1)
INDIVIDUAL PLAY DATA (2)
1:SHOT DISTANCE DATA
2: PRACTICE DATA
3: PLAY DATA
PRACTICEST AGE
DATA TYPE IDENTIFIER
DATA UPDATE DATE
1W
FIRST STAGE
SHOT DISTANCE 1
SECOND STAGE
SHOT DISTANCE 2
1W
FIRST STAGE
SHOT DISTANCE 1
SECOND STAGE
SHOT DISTANCE 2
CLUB IDENTIFIER
COMMON PORTION
DATA PORTION

FIG.3

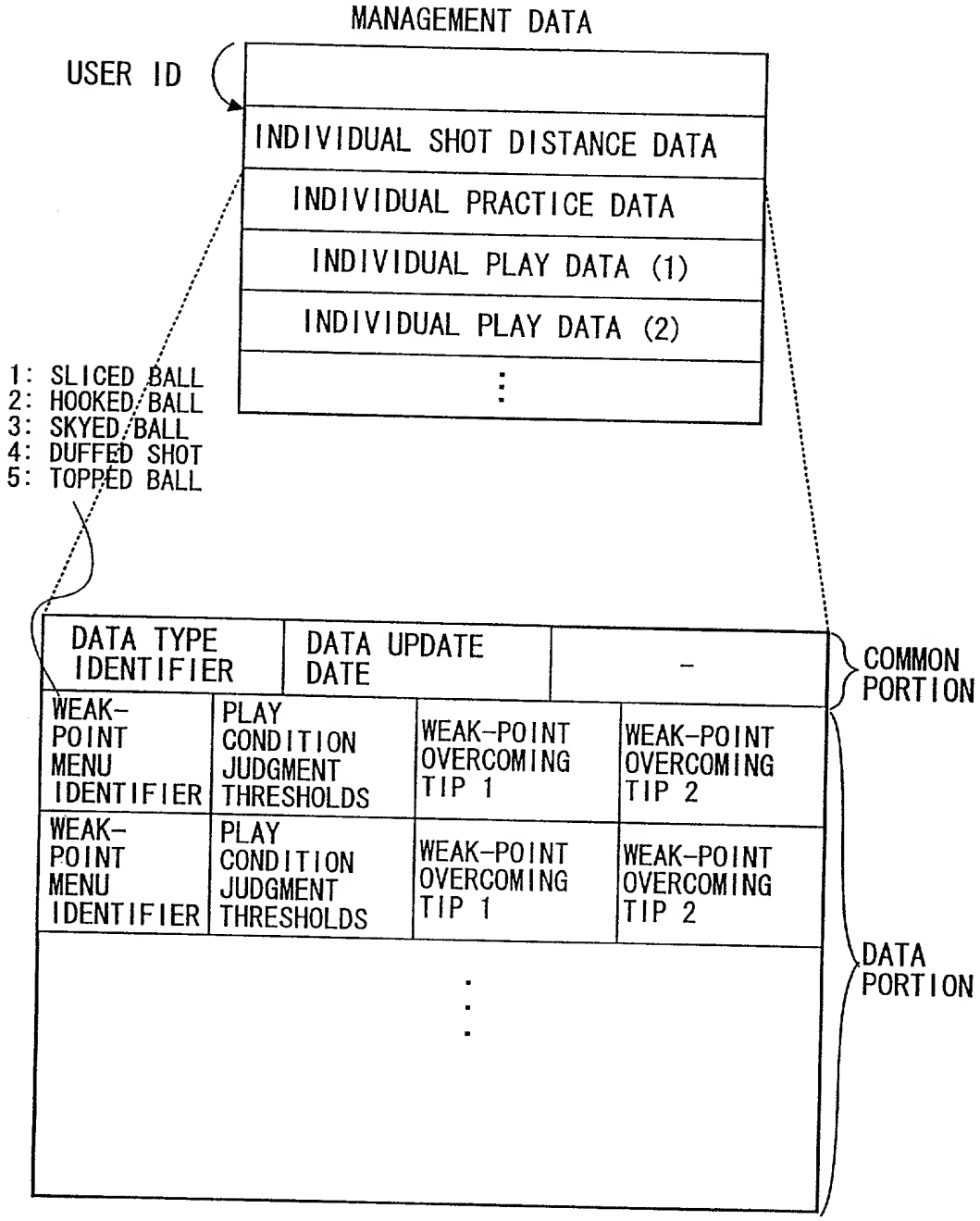

MANAGEMENT DATA
USER ID
INDIVIDUAL SHOT DISTANCE DATA
INDIVIDUAL PRACTICE DATA
INDIVIDUAL PLAY DATA (1)
INDIVIDUAL PLAY DATA (2)
1: SLICED BALL
2: HOOKED BALL
3: SKYED BALL
4: DUFFED SHOT
5: TOPPED BALL
DATA TYPE IDENTIFIER
DATA UPDATE DATE
-
COMMON PORTION
WEAK-POINT MENU IDENTIFIER
PLAY CONDITION JUDGMENT THRESHOLDS
WEAK-POINT OVERCOMING TIP 1
WEAK-POINT OVERCOMING TIP 2
WEAK-POINT MENU IDENTIFIER
PLAY CONDITION JUDGMENT THRESHOLDS
WEAK-POINT OVERCOMING TIP 1
WEAK-POINT OVERCOMING TIP 2
DATA PORTION

FIG.4

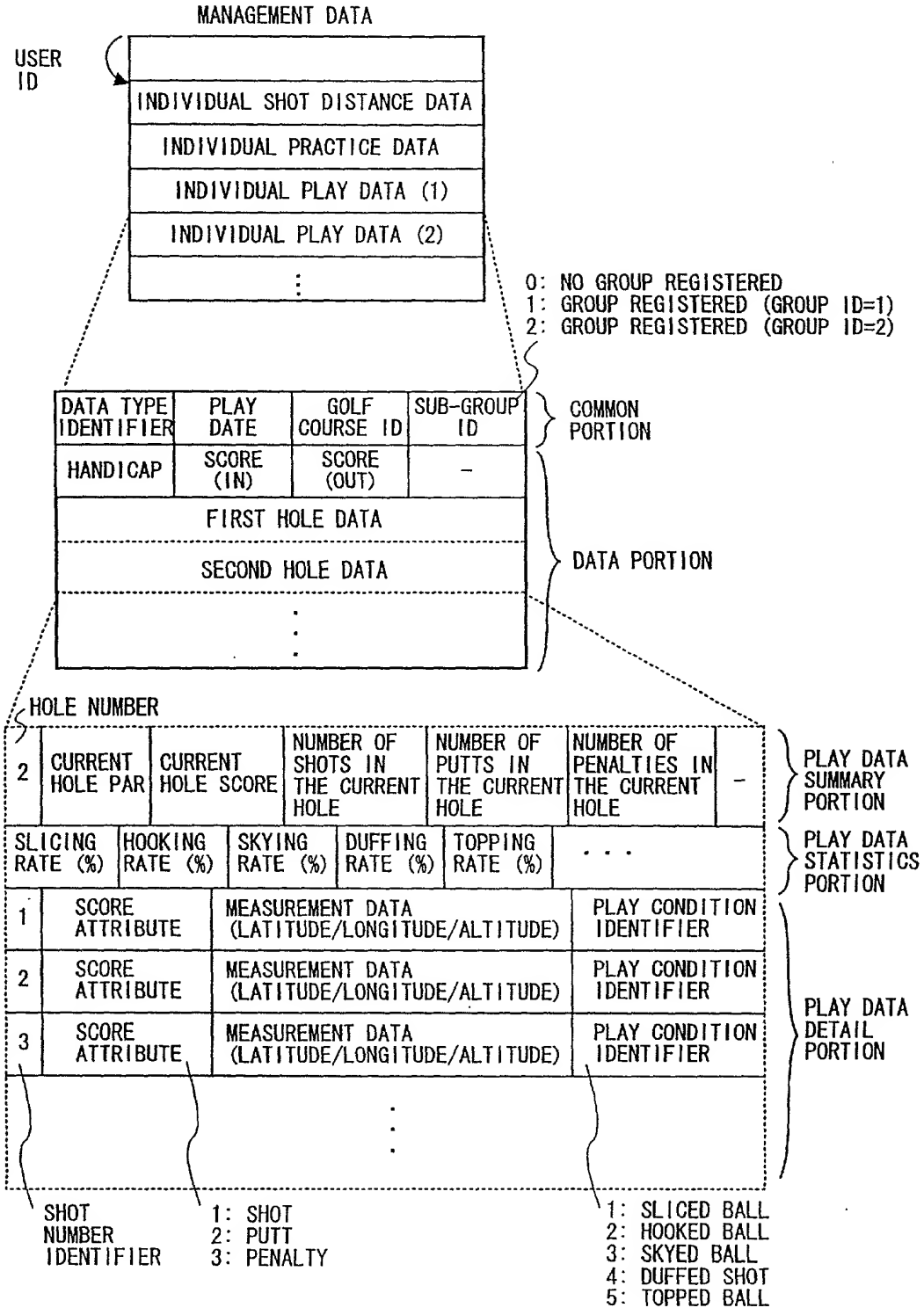

MANAGEMENT DATA
USER ID
INDIVIDUAL SHOT DISTANCE DATA
INDIVIDUAL PRACTICE DATA
INDIVIDUAL PLAY DATA (1)
INDIVIDUAL PLAY DATA (2)
0: NO GROUP REGISTERED
1: GROUP REGISTERED (GROUP ID=1)
2: GROUP REGISTERED (GROUP ID=2)
DATA TYPE IDENTIFIER
PLAY DATE
GOLF COURSE ID
SUB-GROUP ID
COMMON PORTION
HANDICAP
SCORE (IN)
SCORE (OUT)
FIRST HOLE DATA
SECOND HOLE DATA
DATA PORTION
HOLE NUMBER
2
CURRENT HOLE PAR
CURRENT HOLE SCORE
NUMBER OF SHOTS IN THE CURRENT HOLE
NUMBER OF PUTTS IN THE CURRENT HOLE
NUMBER OF PENALTIES IN THE CURRENT HOLE
PLAY DATA SUMMARY PORTION
SLICING RATE (%)
HOOKING RATE (%)
SKYING RATE (%)
DUFFING RATE (%)
TOPPING RATE (%)
PLAY DATA STATISTICS PORTION
1
SCORE ATTRIBUTE
MEASUREMENT DATA (LATITUDE/LONGITUDE/ALTITUDE)
PLAY CONDITION IDENTIFIER
2
3
PLAY DATA DETAIL PORTION
SHOT NUMBER IDENTIFIER
1: SHOT
2: PUTT
3: PENALTY
1: SLICED BALL
2: HOOKED BALL
3: SKYED BALL
4: DUFFED SHOT
5: TOPPED BALL

FIG.5

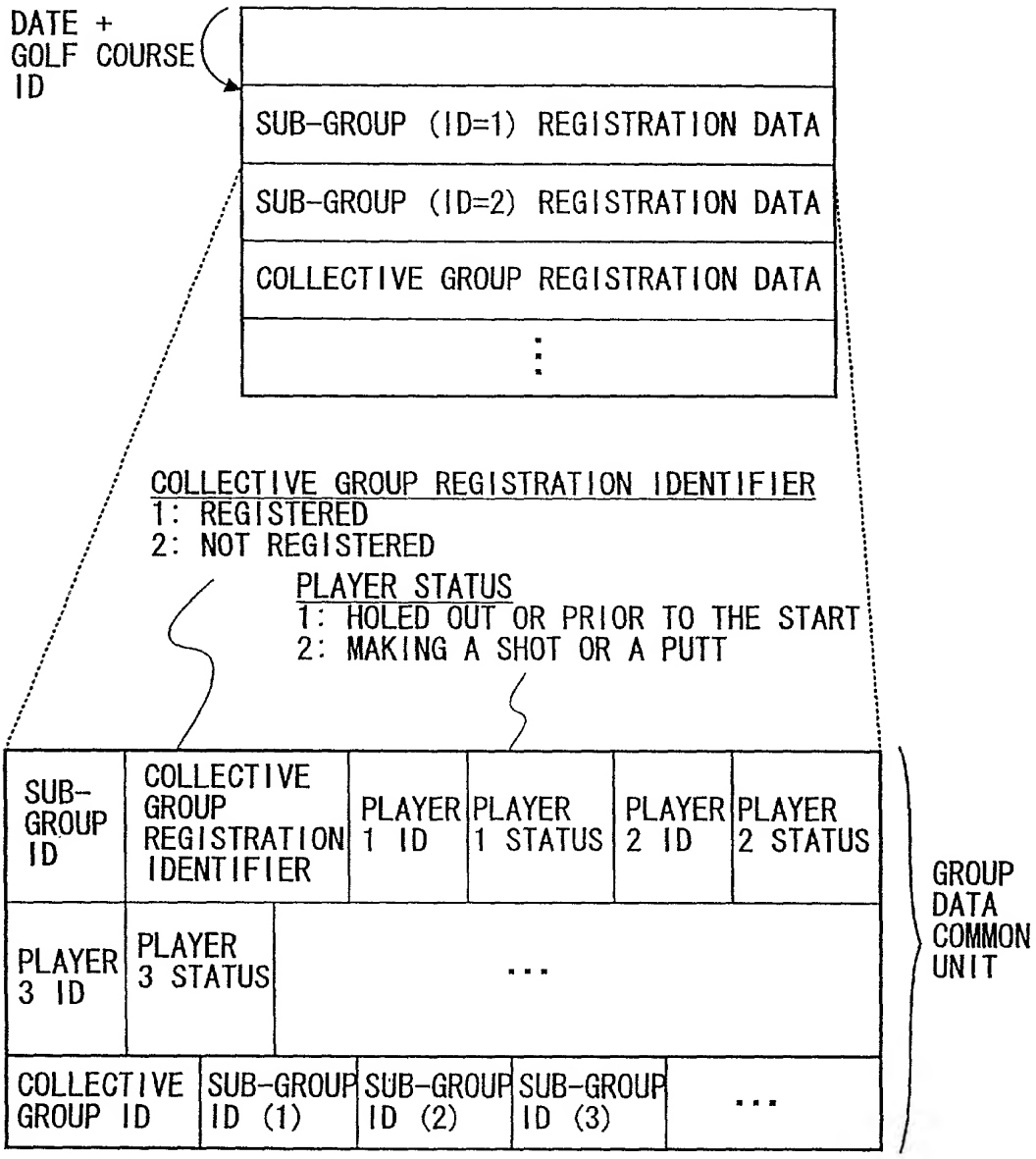

DATE + GOLF COURSE ID
SUB-GROUP (ID=1) REGISTRATION DATA
SUB-GROUP (ID=2) REGISTRATION DATA
COLLECTIVE GROUP REGISTRATION DATA
COLLECTIVE GROUP REGISTRATION IDENTIFIER
1: REGISTERED
2: NOT REGISTERED
PLAYER STATUS
1: HOLED OUT OR PRIOR TO THE START
2: MAKING A SHOT OR A PUTT
SUB-GROUP ID
COLLECTIVE GROUP REGISTRATION IDENTIFIER
PLAYER 1 ID
PLAYER 1 STATUS
PLAYER 2 ID
PLAYER 2 STATUS
PLAYER 3 ID
PLAYER 3 STATUS
...
COLLECTIVE GROUP ID
SUB-GROUP ID (1)
SUB-GROUP ID (2)
SUB-GROUP ID (3)
...
GROUP DATA COMMON UNIT

FIG.6

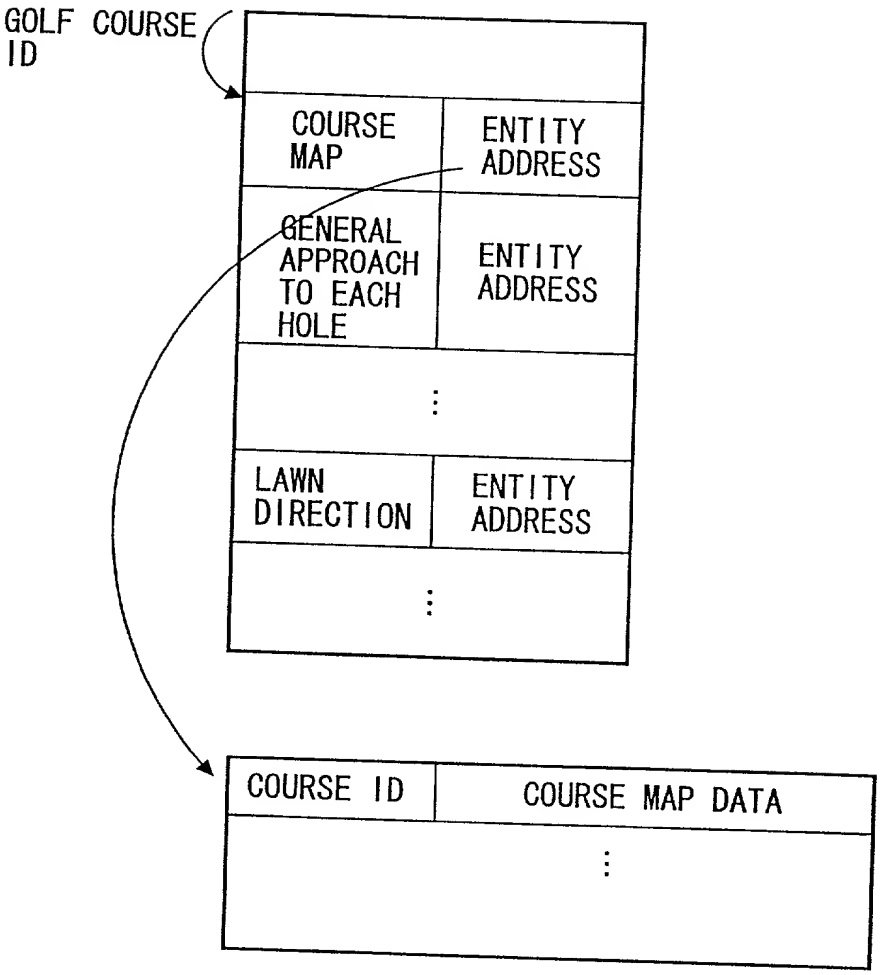

GOLF COURSE ID
COURSE MAP
ENTITY ADDRESS
GENERAL APPROACH TO EACH HOLE
ENTITY ADDRESS
LAWN DIRECTION
ENTITY ADDRESS
COURSE ID
COURSE MAP DATA

FIG.7

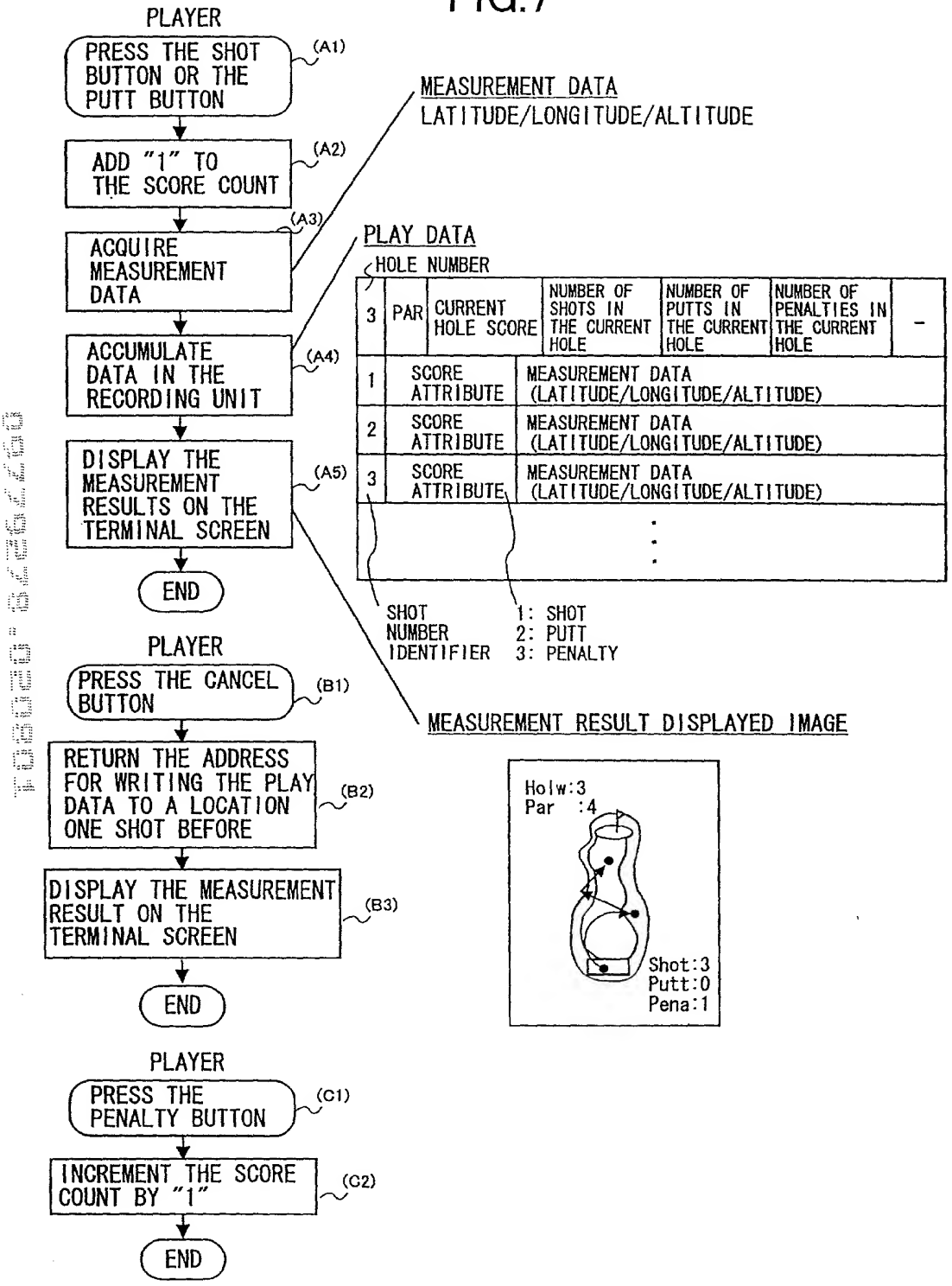
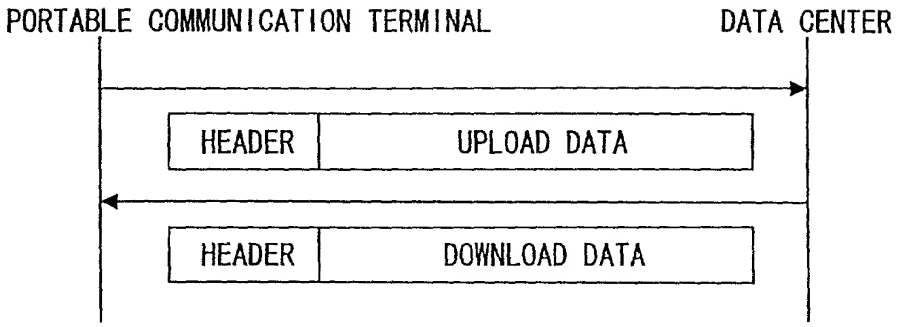

PLAYER
PRESS THE SHOT BUTTON OR THE PUTT BUTTON
(A1)
ADD "1" TO THE SCORE COUNT
(A2)
ACQUIRE MEASUREMENT DATA
(A3)
ACCUMULATE DATA IN THE RECORDING UNIT
(A4)
DISPLAY THE MEASUREMENT RESULTS ON THE TERMINAL SCREEN
(A5)
END
MEASUREMENT DATA
LATITUDE/LONGITUDE/ALTITUDE
PLAY DATA
HOLE NUMBER
3 PAR CURRENT HOLE SCORE NUMBER OF SHOTS IN THE CURRENT HOLE NUMBER OF PUTTS IN THE CURRENT HOLE NUMBER OF PENALTIES IN THE CURRENT HOLE -
1 SCORE ATTRIBUTE MEASUREMENT DATA (LATITUDE/LONGITUDE/ALTITUDE)
2 SCORE ATTRIBUTE MEASUREMENT DATA (LATITUDE/LONGITUDE/ALTITUDE)
3 SCORE ATTRIBUTE MEASUREMENT DATA (LATITUDE/LONGITUDE/ALTITUDE)
SHOT NUMBER IDENTIFIER
1: SHOT
2: PUTT
3: PENALTY
MEASUREMENT RESULT DISPLAYED IMAGE
Holw:3
Par :4
Shot:3
Putt:0
Pena:1
PLAYER
PRESS THE CANCEL BUTTON
(B1)
RETURN THE ADDRESS FOR WRITING THE PLAY DATA TO A LOCATION ONE SHOT BEFORE
(B2)
DISPLAY THE MEASUREMENT RESULT ON THE TERMINAL SCREEN
(B3)
END
PLAYER
PRESS THE PENALTY BUTTON
(C1)
INCREMENT THE SCORE COUNT BY "1"
(C2)
END

FIG.8



(1) UPLOAD HEADER

USER ID	PROCESS CONTENTS IDENTIFIER

- 1: HOLED-OUT PROCESS
- 2: ACQUIRING PROCESS
  - 1: ADVICE
  - 2: COURSE MAP
  - 3: PERFORMANCE DATA
  - 4: WEATHER DATA
    - 1: SCORE RANKING
    - 2: RANKING IN THE LONGEST DRIVE COMPETITION
    - 3: RANKING IN THE NEAREST-TO-THE-PIN COMPETITION
    - 4: SCORE OF A DESIGNATED PLAYER

(2) DOWNLOAD HEADER

USER ID	INFORMATION CONTENTS IDENTIFIER

- 1: DISTRIBUTION DATA (SCORE)
- 2: ACQUIREMENT DATA
  - 1: ADVICE
  - 2: COURSE MAP
  - 3: PERFORMANCE DATA
  - 4: WEATHER DATA
    - 1: SCORE RANKING
    - 2: RANKING IN THE LONGEST DRIVE COMPETITION
    - 3: RANKING IN THE NEAREST-TO-THE-PIN COMPETITION
    - 4: SCORE OF A DESIGNATED PLAYER

FIG.9

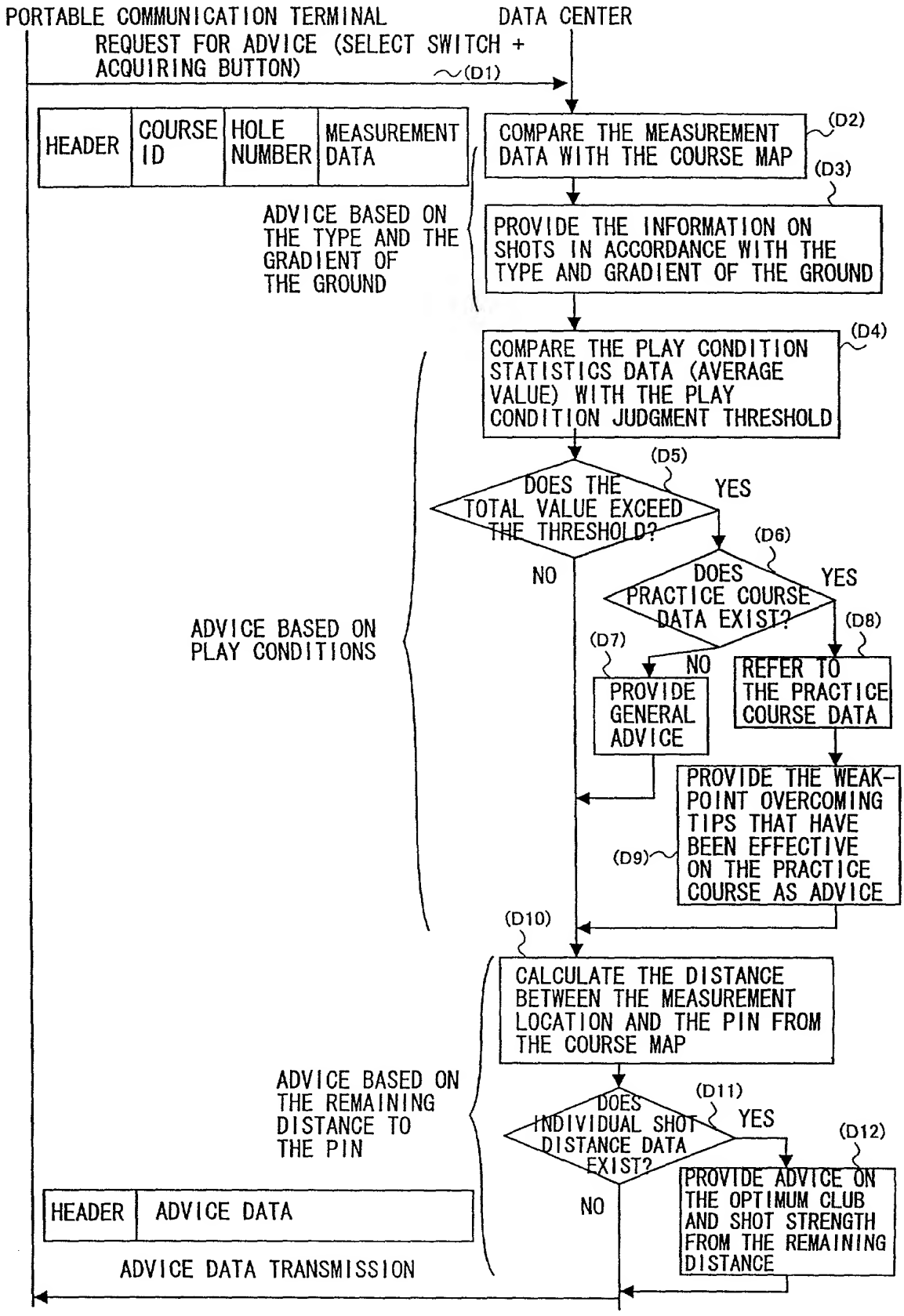

PORTABLE COMMUNICATION TERMINAL
DATA CENTER
REQUEST FOR ADVICE (SELECT SWITCH + ACQUIRING BUTTON)
(D1)
HEADER
COURSE ID
HOLE NUMBER
MEASUREMENT DATA
COMPARE THE MEASUREMENT DATA WITH THE COURSE MAP
(D2)
(D3)
ADVICE BASED ON THE TYPE AND THE GRADIENT OF THE GROUND
PROVIDE THE INFORMATION ON SHOTS IN ACCORDANCE WITH THE TYPE AND GRADIENT OF THE GROUND
(D4)
COMPARE THE PLAY CONDITION STATISTICS DATA (AVERAGE VALUE) WITH THE PLAY CONDITION JUDGMENT THRESHOLD
(D5)
DOES THE TOTAL VALUE EXCEED THE THRESHOLD?
YES
NO
(D6)
DOES PRACTICE COURSE DATA EXIST?
YES
(D8)
(D7)
NO
ADVICE BASED ON PLAY CONDITIONS
PROVIDE GENERAL ADVICE
REFER TO THE PRACTICE COURSE DATA
PROVIDE THE WEAK-POINT OVERCOMING TIPS THAT HAVE BEEN EFFECTIVE ON THE PRACTICE COURSE AS ADVICE
(D9)
(D10)
CALCULATE THE DISTANCE BETWEEN THE MEASUREMENT LOCATION AND THE PIN FROM THE COURSE MAP
ADVICE BASED ON THE REMAINING DISTANCE TO THE PIN
(D11)
DOES INDIVIDUAL SHOT DISTANCE DATA EXIST?
YES
NO
(D12)
PROVIDE ADVICE ON THE OPTIMUM CLUB AND SHOT STRENGTH FROM THE REMAINING DISTANCE
HEADER
ADVICE DATA
ADVICE DATA TRANSMISSION

FIG.10

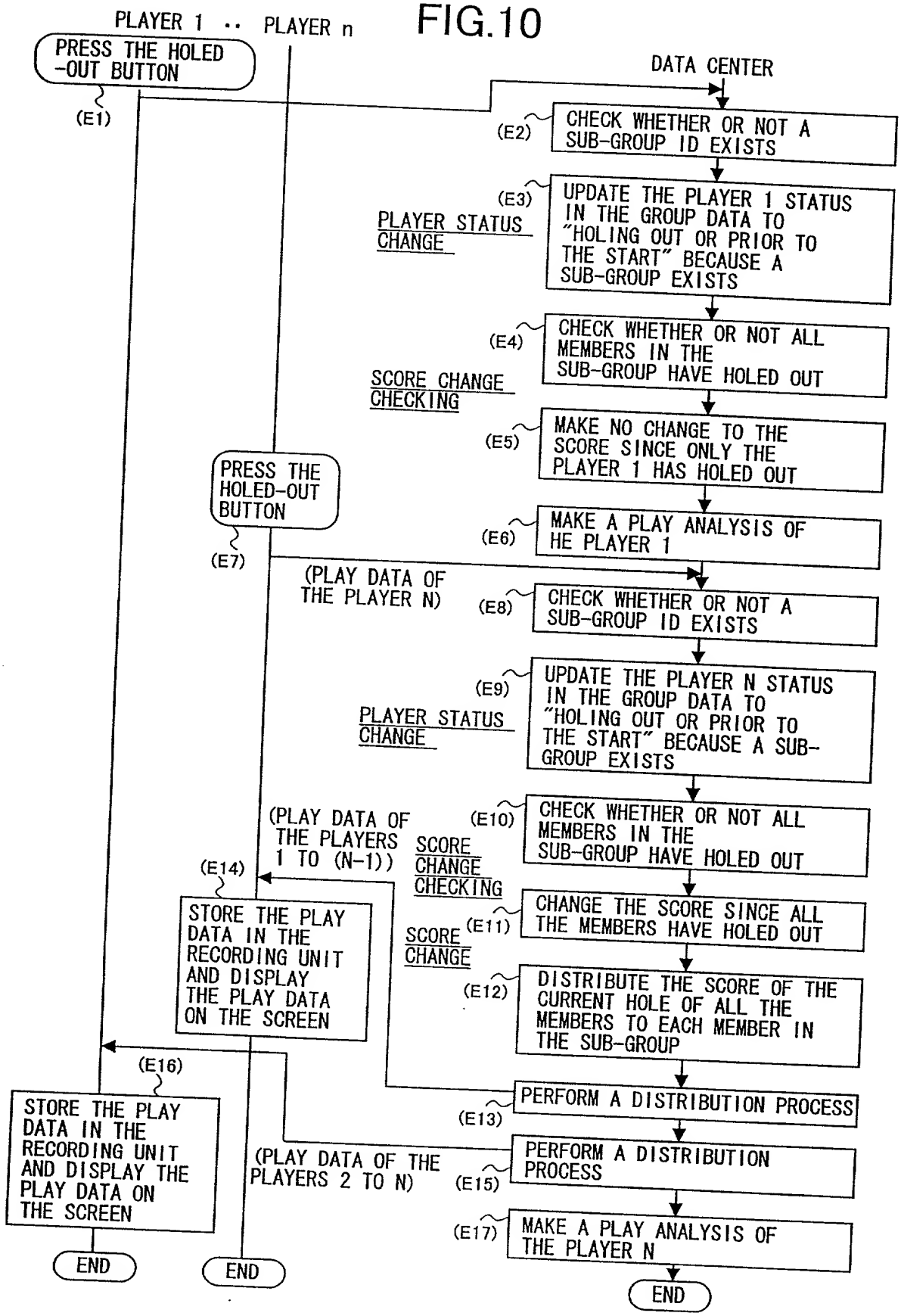
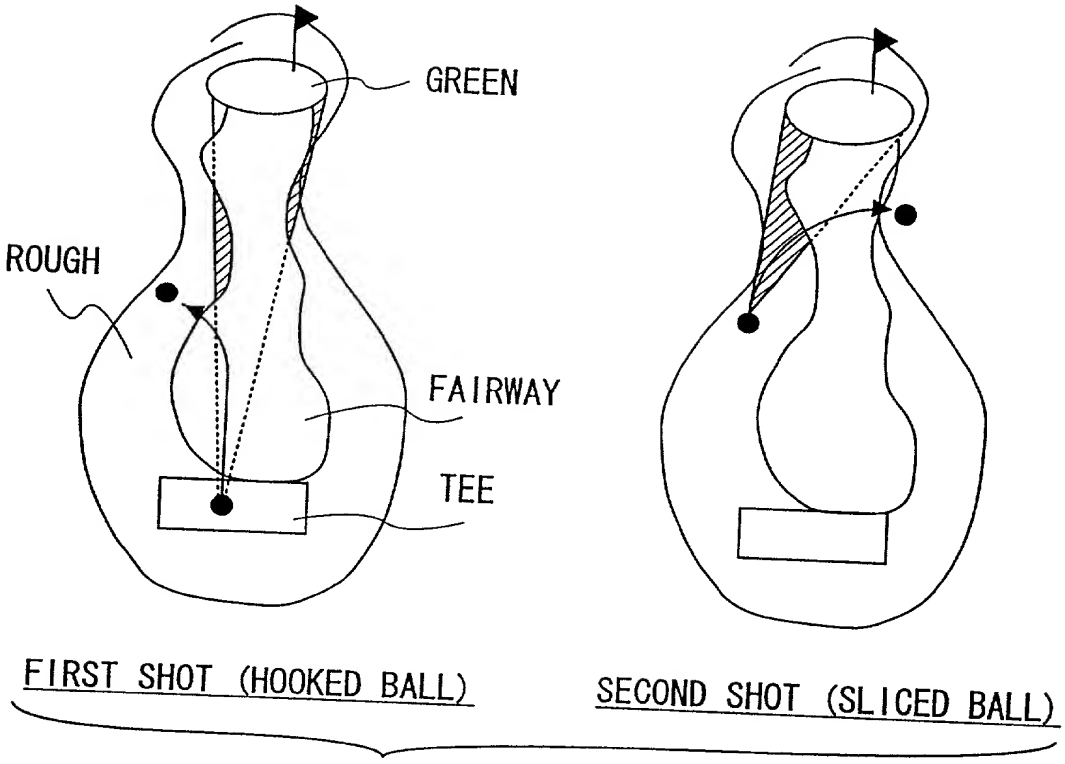

PLAYER 1 .. PLAYER n
DATA CENTER
PRESS THE HOLED -OUT BUTTON
(E1)
(E2)
CHECK WHETHER OR NOT A SUB-GROUP ID EXISTS
(E3)
PLAYER STATUS CHANGE
UPDATE THE PLAYER 1 STATUS IN THE GROUP DATA TO "HOLING OUT OR PRIOR TO THE START" BECAUSE A SUB-GROUP EXISTS
(E4)
SCORE CHANGE CHECKING
CHECK WHETHER OR NOT ALL MEMBERS IN THE SUB-GROUP HAVE HOLED OUT
(E5)
MAKE NO CHANGE TO THE SCORE SINCE ONLY THE PLAYER 1 HAS HOLED OUT
PRESS THE HOLED-OUT BUTTON
(E6)
MAKE A PLAY ANALYSIS OF HE PLAYER 1
(E7)
(PLAY DATA OF THE PLAYER N)
(E8)
CHECK WHETHER OR NOT A SUB-GROUP ID EXISTS
(E9)
PLAYER STATUS CHANGE
UPDATE THE PLAYER N STATUS IN THE GROUP DATA TO "HOLING OUT OR PRIOR TO THE START" BECAUSE A SUB-GROUP EXISTS
(PLAY DATA OF THE PLAYERS 1 TO (N-1))
(E10)
SCORE CHANGE CHECKING
CHECK WHETHER OR NOT ALL MEMBERS IN THE SUB-GROUP HAVE HOLED OUT
(E14)
STORE THE PLAY DATA IN THE RECORDING UNIT AND DISPLAY THE PLAY DATA ON THE SCREEN
(E11)
SCORE CHANGE
CHANGE THE SCORE SINCE ALL THE MEMBERS HAVE HOLED OUT
(E12)
DISTRIBUTE THE SCORE OF THE CURRENT HOLE OF ALL THE MEMBERS TO EACH MEMBER IN THE SUB-GROUP
(E16)
(E13)
PERFORM A DISTRIBUTION PROCESS
STORE THE PLAY DATA IN THE RECORDING UNIT AND DISPLAY THE PLAY DATA ON THE SCREEN
(PLAY DATA OF THE PLAYERS 2 TO N)
(E15)
PERFORM A DISTRIBUTION PROCESS
(E17)
MAKE A PLAY ANALYSIS OF THE PLAYER N
END
END
END

FIG.11


GREEN
ROUGH
FAIRWAY
TEE
FIRST SHOT (HOOKED BALL)
SECOND SHOT (SLICED BALL)

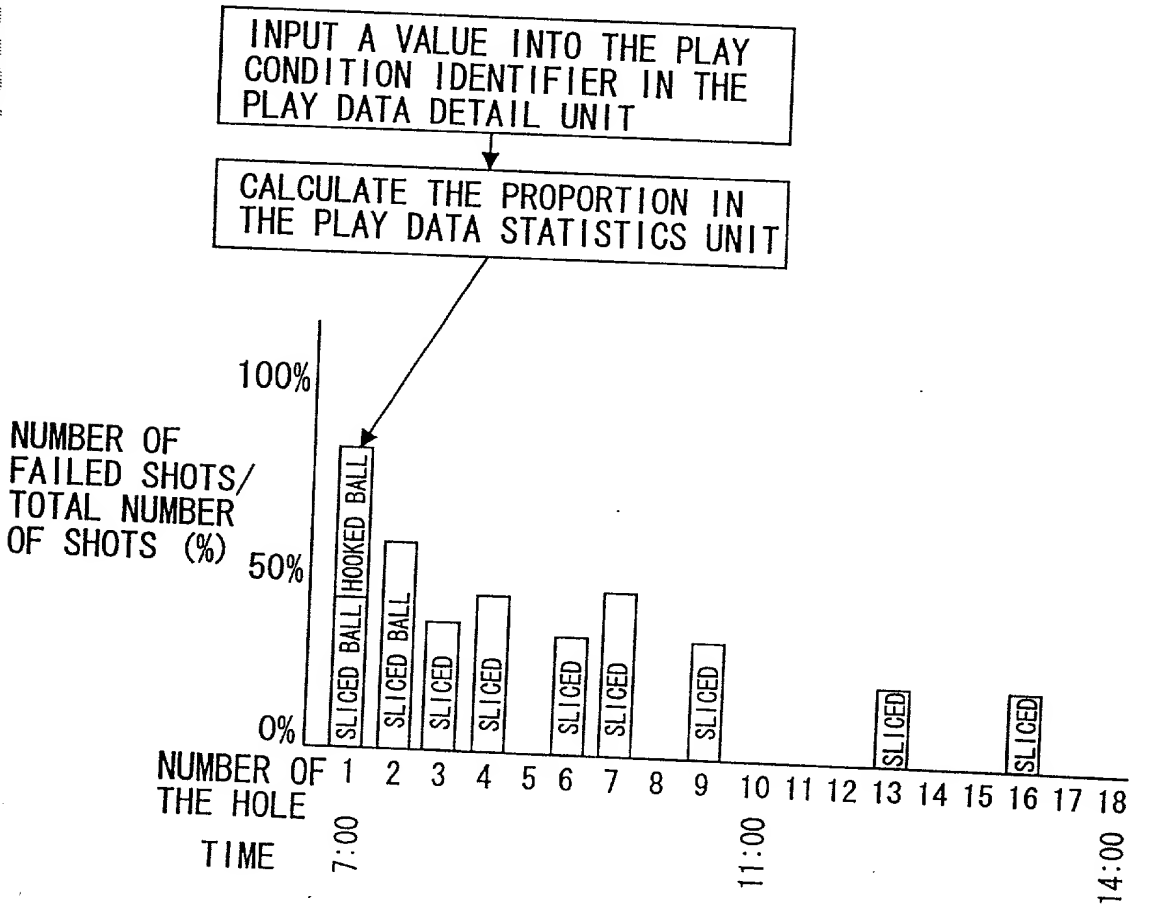

INPUT A VALUE INTO THE PLAY CONDITION IDENTIFIER IN THE PLAY DATA DETAIL UNIT
CALCULATE THE PROPORTION IN THE PLAY DATA STATISTICS UNIT
100%
50%
0%
NUMBER OF FAILED SHOTS/ TOTAL NUMBER OF SHOTS (%)
HOOKED BALL
SLICED BALL
SLICED
NUMBER OF THE HOLE
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
TIME
7:00
11:00
14:00

FIG.12

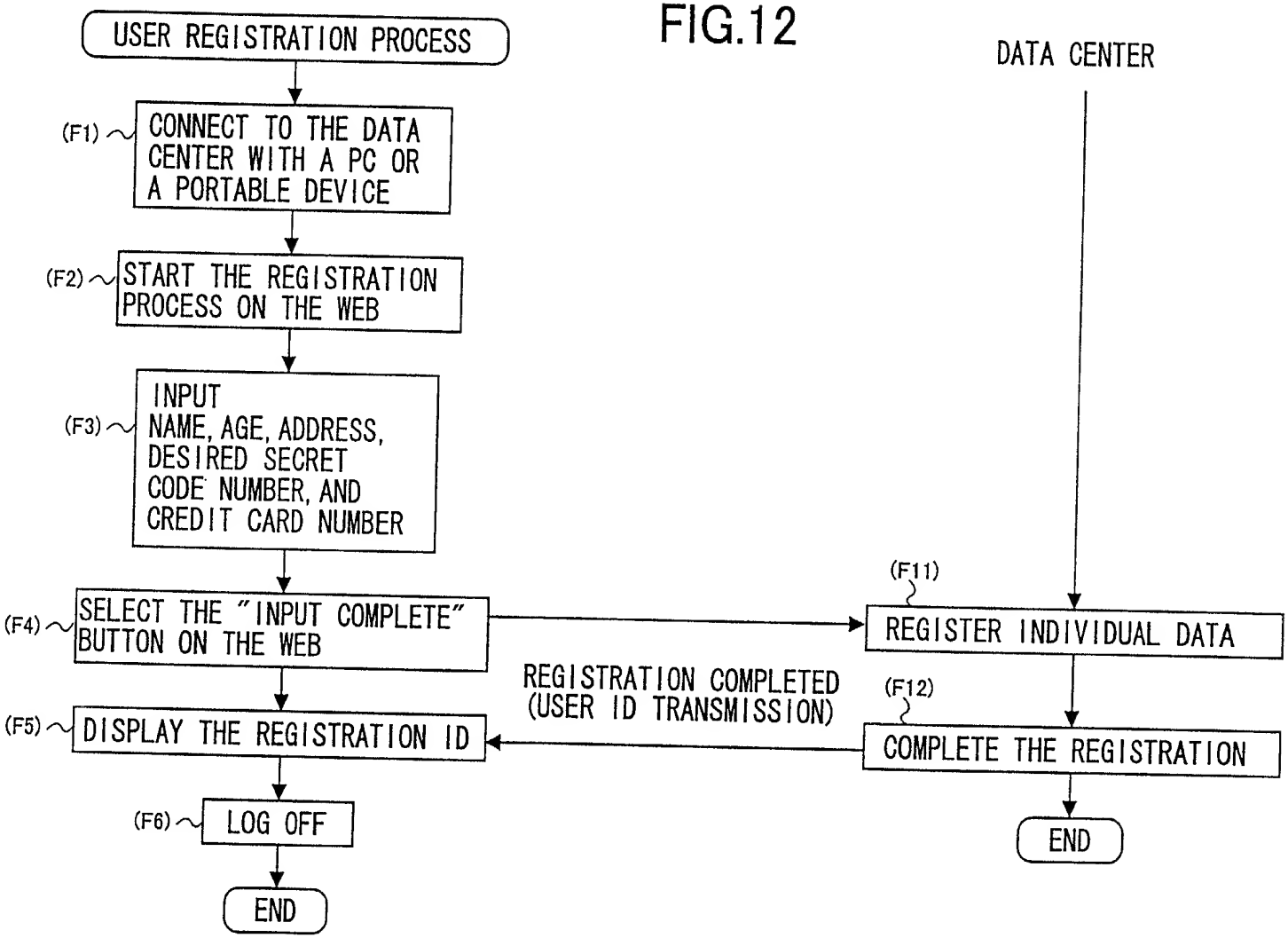

USER REGISTRATION PROCESS
(F1)
CONNECT TO THE DATA CENTER WITH A PC OR A PORTABLE DEVICE
(F2)
START THE REGISTRATION PROCESS ON THE WEB
(F3)
INPUT NAME, AGE, ADDRESS, DESIRED SECRET CODE NUMBER, AND CREDIT CARD NUMBER
(F4)
SELECT THE "INPUT COMPLETE" BUTTON ON THE WEB
(F5)
DISPLAY THE REGISTRATION ID
(F6)
LOG OFF
END
DATA CENTER
(F11)
REGISTER INDIVIDUAL DATA
REGISTRATION COMPLETED (USER ID TRANSMISSION)
(F12)
COMPLETE THE REGISTRATION
END

FIG.13

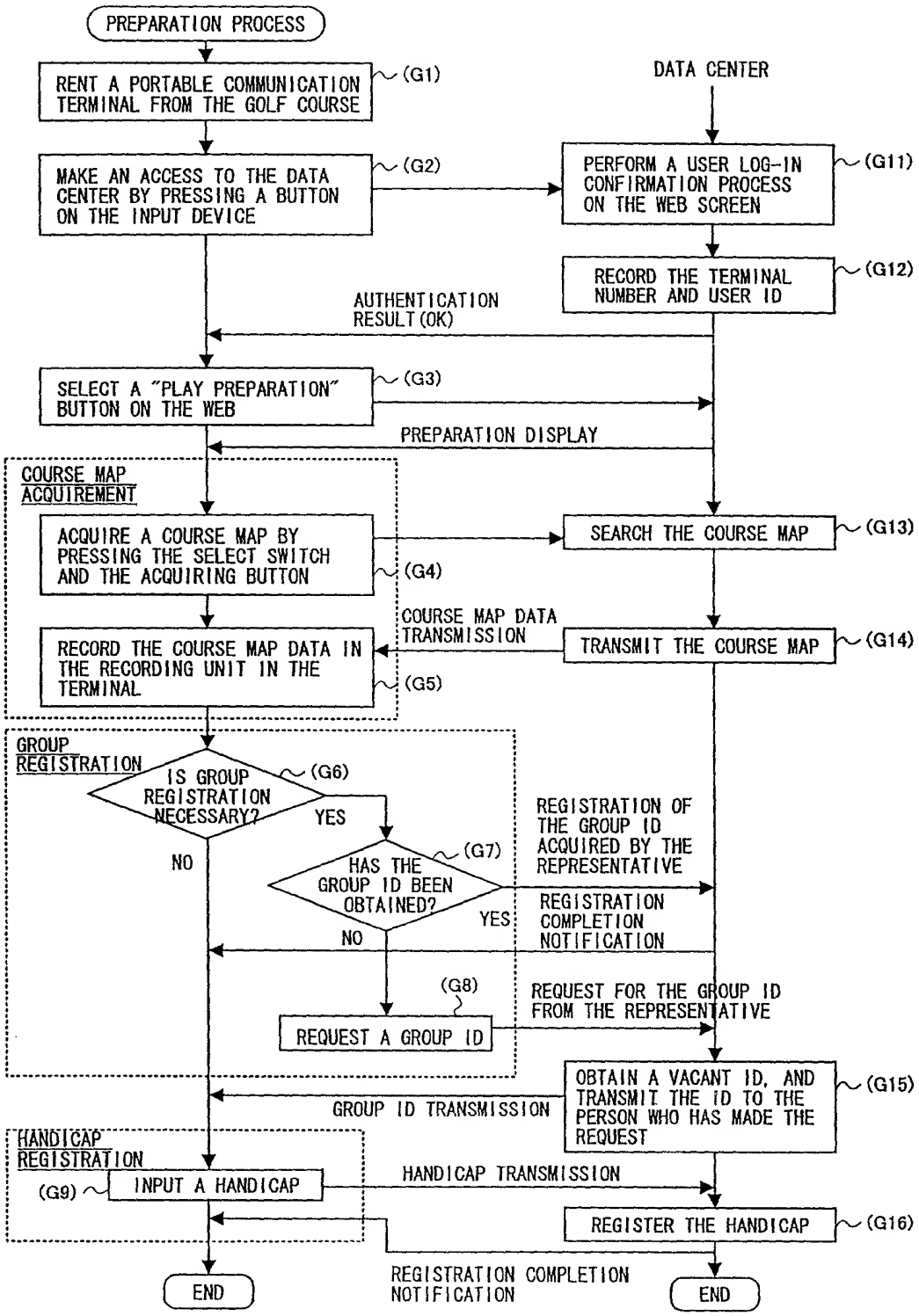

PREPARATION PROCESS
RENT A PORTABLE COMMUNICATION TERMINAL FROM THE GOLF COURSE
(G1)
DATA CENTER
MAKE AN ACCESS TO THE DATA CENTER BY PRESSING A BUTTON ON THE INPUT DEVICE
(G2)
PERFORM A USER LOG-IN CONFIRMATION PROCESS ON THE WEB SCREEN
(G11)
RECORD THE TERMINAL NUMBER AND USER ID
(G12)
AUTHENTICATION RESULT (OK)
SELECT A "PLAY PREPARATION" BUTTON ON THE WEB
(G3)
PREPARATION DISPLAY
COURSE MAP ACQUIREMENT
ACQUIRE A COURSE MAP BY PRESSING THE SELECT SWITCH AND THE ACQUIRING BUTTON
(G4)
SEARCH THE COURSE MAP
(G13)
COURSE MAP DATA TRANSMISSION
RECORD THE COURSE MAP DATA IN THE RECORDING UNIT IN THE TERMINAL
(G5)
TRANSMIT THE COURSE MAP
(G14)
GROUP REGISTRATION
IS GROUP REGISTRATION NECESSARY?
(G6)
YES
NO
HAS THE GROUP ID BEEN OBTAINED?
(G7)
YES
NO
REGISTRATION OF THE GROUP ID ACQUIRED BY THE REPRESENTATIVE
REGISTRATION COMPLETION NOTIFICATION
(G8)
REQUEST A GROUP ID
REQUEST FOR THE GROUP ID FROM THE REPRESENTATIVE
OBTAIN A VACANT ID, AND TRANSMIT THE ID TO THE PERSON WHO HAS MADE THE REQUEST
(G15)
GROUP ID TRANSMISSION
HANDICAP REGISTRATION
(G9)
INPUT A HANDICAP
HANDICAP TRANSMISSION
REGISTER THE HANDICAP
(G16)
REGISTRATION COMPLETION NOTIFICATION
END
END

FIG.14

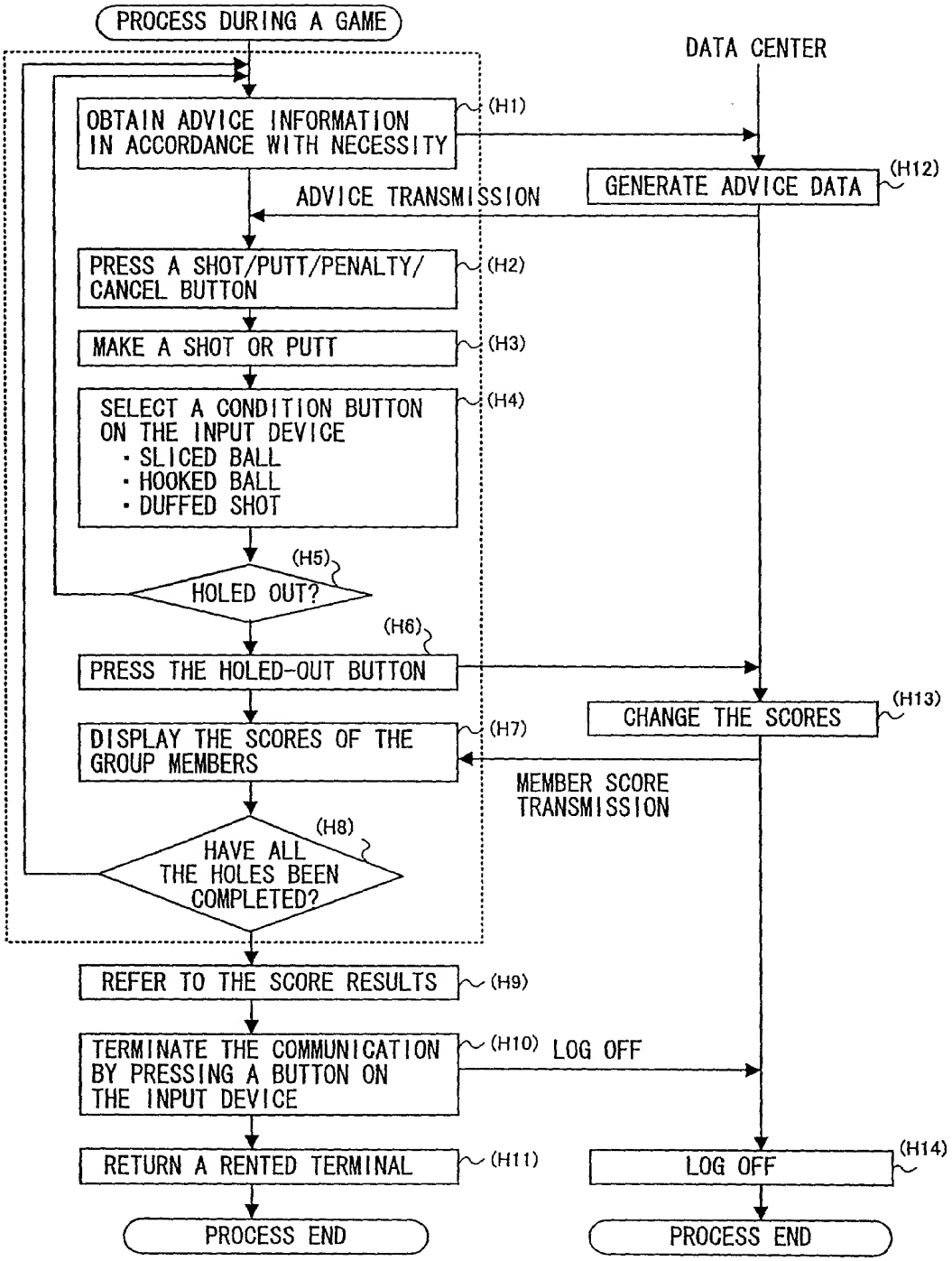

PROCESS DURING A GAME
DATA CENTER
OBTAIN ADVICE INFORMATION IN ACCORDANCE WITH NECESSITY
(H1)
GENERATE ADVICE DATA
(H12)
ADVICE TRANSMISSION
PRESS A SHOT/PUTT/PENALTY/ CANCEL BUTTON
(H2)
MAKE A SHOT OR PUTT
(H3)
SELECT A CONDITION BUTTON ON THE INPUT DEVICE
・SLICED BALL
・HOOKED BALL
・DUFFED SHOT
(H4)
(H5)
HOLED OUT?
(H6)
PRESS THE HOLED-OUT BUTTON
CHANGE THE SCORES
(H13)
DISPLAY THE SCORES OF THE GROUP MEMBERS
(H7)
MEMBER SCORE TRANSMISSION
(H8)
HAVE ALL THE HOLES BEEN COMPLETED?
REFER TO THE SCORE RESULTS
(H9)
TERMINATE THE COMMUNICATION BY PRESSING A BUTTON ON THE INPUT DEVICE
(H10)
LOG OFF
RETURN A RENTED TERMINAL
(H11)
LOG OFF
(H14)
PROCESS END
PROCESS END

FIG.15A

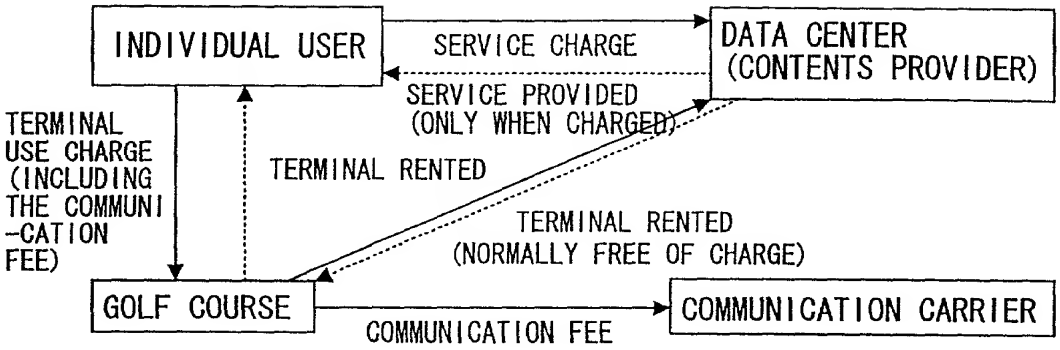


FIG.15B

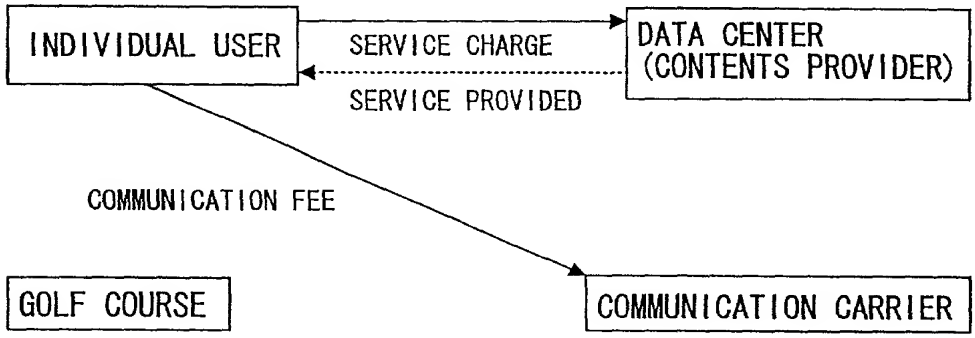
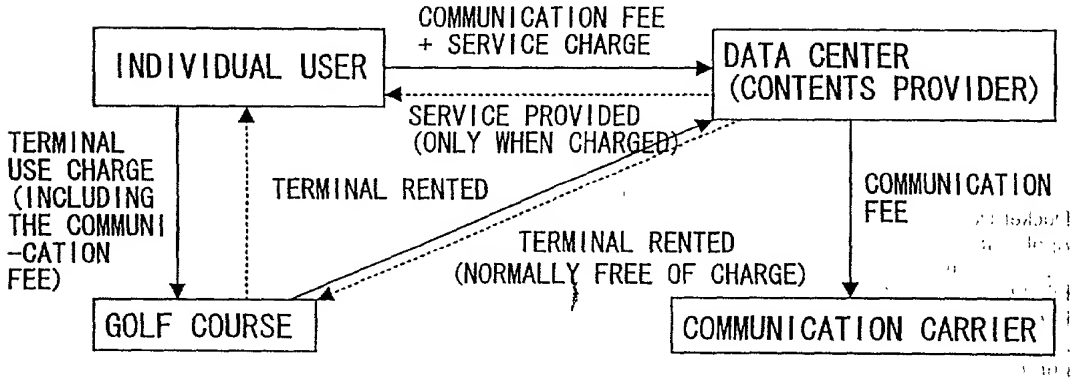



FIG.15C